ALGORITHMS IN DIAGNOSTIC MOLECULAR PARASITOLOGY

DIVISION OF PARASITIC DISEASES AND MALARIA

CENTERS FOR DISEASE CONTROL AND PREVENTION

MARCH 7-10, 2017 • ATLANTA, GA

P.A.C.E. ® Course #: 288-001-17
Florida #: 20-551821

Sponsored by:

The Division of Parasitic Diseases and Malaria, Center for Global Health, and the Laboratory Training Team, Laboratory Training and Services Branch, Division of Laboratory Systems, Center for Surveillance, Epidemiology, and Laboratory Services, Centers for Disease Control and Prevention (CDC)

Location

Centers for Disease Control and Prevention, Atlanta, GA

Faculty

Parasitic Diseases Branch, Division of Parasitic Diseases and Malaria, Center for Global Health, CDC, Atlanta, GA

- **Theresa Benedict, BS**, Biologist
- **Richard Bradbury, PhD,** Microbiologist
- **Katie Breen, BS,** Biologist
- **Marcos de Almeida, PhD,** Microbiologist
- **Yvonne Qvarnstrom, PhD**, Microbiologist

Course Organizers

- **Laboratory Training Team, Laboratory Training and Services Branch, Division of Laboratory Systems, Center for Surveillance, Epidemiology, and Laboratory Services, Centers for Disease Control and Prevention, Atlanta, GA**
    - *Rebecca Bandea, MS,* Health Scientist, E-mail: rbandea@cdc.gov
    - *Karen Ching, Ph.D*, Health Scientist, E-mail: kching@cdc.gov

Course Objectives

At the conclusion of this program, the participants will be able to:

- Select algorithms for using molecular techniques in the parasitology laboratory for investigating and diagnosing parasitic diseases.
- Recognize the usefulness and limitations of different methods in diagnostic parasitology.
- Identify specimen preservatives and DNA extraction techniques suitable for diagnostic parasitology.
- Perform real-time PCR techniques for the detection of parasitic disease agents, including *Cyclospora cayetanensis, Entamoeba spp.*, *Babesia microti*, *Leishmania* spp., *Trypanosoma cruzi*, and *Plasmodium* spp.

Description

Certain aspects of parasitic agents present unique considerations for the use of polymerase chain reaction (PCR) for diagnostic parasitology. Techniques and processes that are successfully used to identify bacteria and viruses may not be applicable to parasites. In addition, the efficient use of molecular testing in diagnostic parasitology should be based on robust algorithms. This three and one-half day, hands-on laboratory workshop will provide the tools necessary to make evidence based decisions relative to implementing and performing molecular methods to diagnose parasitic diseases.

APPLICATION & REGISTRATION

* FREE REGISTRATION

Application Deadline: January 5, 2017

NEW TWO-PART APPLICATION PROCESS!

Both parts must be submitted by **January 5, 2017** to be considered.

1. Complete the application form online at: **January 5, 2017**
2. Submit a brief CV or resume highlighting your experience in the area of laboratory testing relevant to this course on **January 5, 2017**. Email CV or resume to labtraining@cdc.gov. Type "288-001-17 ALGORITHMS IN DIAGNOSTIC MOLECULAR PARASITOLOGY" in the line of the email.

If you are unable to complete the application online, notify Karen Ching at 404-498-6403 or email kching@cdc.gov.

- Click this link for an example of a brief CV.
- Participants will be selected according to the applicants' job description, experience, and responsibilities.
- Notification of acceptance status will be sent via email by **January 10, 2017.**

Audience

This beginner-level, hands-on workshop is intended for parasitologists, molecular biologists, or other professionals with some experience in performing PCR. Candidates for this class must currently perform diagnostic molecular techniques or be considering the implementation of diagnostic molecular parasitology in the future. Availability limited to 16 spaces.

Security Clearance Requirements

NON-US CITIZENS —This course will be held at the training laboratory on the CDC Roybal campus. Due to CDC requirements for security clearance, all non-US citizens will be asked to provide information needed to obtain clearance. Detailed instructions will be provided upon acceptance into the course. Please do not make any nonrefundable travel plans until you have received confirmation of acceptance into the course and security clearance approval. The information you provide will only be used for the purposes of attending this course.

US CITIZENS - If you are a US citizen, there is no extra clearance process required.

Continuing Education

The Centers for Disease Control and Prevention Laboratory Training Team is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® Program. This course is approved for 18.5 contact hours.

This course has been approved for 18.5 contact hours in the category of Microbiology/Mycology/Parasitology for Florida Laboratory Licensees.

Disclosure

CDC, our planners, and our presenters wish to disclose they have no financial interests or other relationships with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters. Presentations will not include any discussion of the unlabeled use of a product or a product under investigational use.

Use of trade names and commercial sources is for identification only and does not imply endorsement by the Division of Laboratory Systems, Center for Surveillance, Epidemiology, and Laboratory Services, Centers for Disease Control and Prevention, or the U.S. Department of Health and Human Services.

Special Needs

In compliance with the Americans with Disabilities Act (ADA), individuals seeking special accommodations should submit their request in writing to rbandea@cdc.gov or phone 404-639-4554 at least three weeks before the program. Please allow sufficient time for CDC to make arrangements which is normally at least three weeks prior to the start date of course.

QUESTIONS

Please contact Karen Ching at 404-498-6403 or email kching@cdc.gov.

AGENDA

DAY 1—Tuesday, March 7, 2017			
TIME	**TYPE**	**ITEM**	**SPEAKER**
8:30 am	Lecture	Welcome and Course Overview	Karen Ching
8:45 am	Lecture	Safety Briefing	Becky Bandea
9:00 am	Lecture	Pre- course Test	Karen Ching
9:45 am	Break	Break	
10:00 am	Lecture	Public Health Applications of Diagnostic Methods in Parasitology	Theresa Benedict
10:30 am	Lecture	Collection, Preservation, and DNA Extraction Methods	TBD
11:15 am	Lunch	Cafeteria	
12:30 pm	Lecture	Basic Principles of Real-time PCR	Yvonne Qvarnstrom
1:00 pm	Lecture	Algorithms Applied to the Diagnosis of Parasitic Diseases I	TBD
2:00 pm	Lab	Algorithms Applied to the Diagnosis of Parasitic Diseases I	Staff
3:00 pm	Break	Break	
3:15 pm	Lab	Algorithms Applied to the Diagnosis of Parasitic Diseases I (cont'd)	Staff
4:15 pm	Lecture	Questions and Answers	Staff
4:30 pm		Adjourn	

DAY 2—Wednesday, March 8, 2017			
TIME	**TYPE**	**ITEM**	**SPEAKER**
8:30 am	Lecture	Algorithms Applied to the Diagnosis of Parasitic Diseases II	Yvonne Qvarnstrom
9:00 am	Lab	Algorithms Applied to the Diagnosis of Parasitic Diseases II	Staff
9:45 am	Break	Break	
10:00 am	Lecture	Algorithms Applied to the Diagnosis of Parasitic Diseases III	Theresa Benedict
10:30 am	Lab	Algorithms Applied to the Diagnosis of Parasitic Diseases III	Staff
11:15	Lunch	Lunch	
12:30 pm	Lab	Algorithms Applied to the Diagnosis of Parasitic Diseases III (Cont'd)	Staff
1:15 pm	Lecture	Algorithms Applied to the Diagnosis of Parasitic Diseases IV	Staff
2:15 pm	Break	Break	
2:30 pm	Lab	Algorithms Applied to the Diagnosis of Parasitic Diseases IV	Staff
3:15 pm	Lecture	Algorithms Applied to the Diagnosis of Parasitic Diseases V	TBD
4:15 pm	Lecture	Questions and Answers	Staff
4:30 pm		Adjourn	

DAY 3—Thursday, March 9, 2017			
TIME	**TYPE**	**ITEM**	**SPEAKER**
8:30 am	Lab	Algorithms Applied to the Diagnosis of Parasitic Diseases V	Staff
9:15 am	Break	Break	
9:30 am	lecture	Algorithms Applied to the Diagnosis of Parasitic Diseases VI	TBD
10:30 am	Lab	Algorithms Applied to the Diagnosis of Parasitic Diseases VI	Staff
11:15 am	Lunch	Lunch	
12:30 pm	Lecture	Group discussion: Analysis & Discussion of Real-time PCR Results	Yvonne Qvarnstrom
2:30 pm	Break	Break	
2:45 pm	Lecture	Group discussion: Analysis & Discussion of Real-time PCR Results	Yvonne Qvarnstrom
4:30 pm		Adjourn	

DAY 4— Friday, March 10, 2017			
TIME	**TYPE**	**ITEM**	**SPEAKER**
8:30 am	Lecture	**Group discussion**: Analysis & Discussion of Real-time PCR Results	Yvonne Qvarnstrom
9:45 am	Break	Break	
10:00 am	lecture	Implementation & Troubleshooting of PCR in Diagnostic Parasitology	Yvonne Qvarnstrom
10:30 am	Lecture	Question & Answer	Staff
10:45 am	Lecture	Post-Course Test	Karen Ching
11:30 pm	Lecture	Evaluation	Karen Ching
12:00 pm		Adjourn	